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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,840	03/29/2004	Darren Kenneth Rogers	07620008C1	9132
48642	7590	12/14/2006	EXAMINER	
PHILIP D. LANE			KRISHNAN, MALINI	
P.O. BOX 79318			ART UNIT	
CHARLOTTE, NC 28271-7063			PAPER NUMBER	

1714

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,840

Applicant(s)

ROGERS, DARREN KENNETH

Examiner

Malini Krishnan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/29/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klett ('775), and Klett (CARBON Vol. 38, issue 7, pgs. 953-973, 2000), hereinafter referred to as Klett (CARBON), in view of Harnett ('437), hereinafter referred to as Harnett, Kolling ('604), hereinafter referred to as Kolling, Murdie ('171), hereinafter referred to as Murdie, and Nagle ('096), hereinafter referred to as Nagle.

Klett ('775) discloses a porous carbon foam, having a density of 0.53 g/cm³, made from a mesophase pitch derived from petroleum pitch. The foam is produced by placing powdered mesophase pitch into a mold and heating from 50 to 100°C above the softening point of the pitch (Example 1: col. 6, lines 43-65). Therefore, it is the examiner's position that depending on the pitch used, the heating temperature would

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change accordingly. In light of Klett (CARBON), a mesophase pitch such as Conoco B mesophase having a softening point of 355°C (Table 2) could be chosen, and therefore would be heated to about 400 to 455°C. Klett ('775) also discloses that heating takes place in a non-oxidizing atmosphere at a pressure up to 1000 psi. The foam is then controllably cooled at a desired rate. Properties of the foam samples are listed in Table II under column 21. Data for a foam produced from a Conoco mesophase can be found in which a pressure of 400 psi and a maximum treatment temperature of 1000°C were applied, density is 0.33 g/cm³, and thermal conductivity is 0.9 W/mK.

Klett ('775) does not disclose (i) a compressive strength in the range of about 2000 psi to 6000 psi, and (ii) a cooling rate of 10°C/minute to a temperature of 100°C.

With respect to (i) above, Harnett discloses a petroleum coke-based porous product having a compressive strength greater than 5000 psi (Col. 4, lines 4-9). Kolling discloses a method of producing coke from pitch (Col. 1, lines 56-60; Col. 2, lines 21-25). In light of Kolling, the product of Harnett can therefore still be viewed as a pitch-based product.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to combine the teachings of Klett, Harnett and Kolling in order to produce a pitch-based foam capable of sustaining stronger forces.

With respect to (ii) above, Murdie discloses a pitch-based carbon foam in which the foam is cooled to about 60-120°C (Col. 6, lines 50-55). The pitch is kept warm at this temperature to prevent cracking and avoid making the material brittle. Nagle discloses a process for producing carbon foams in which the materials can be cooled at

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a various rates, including those greater than 100°C/hour for activated carbon applications (Col. 19, lines 30-35).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to combine the teachings of Klett with Murdie and Nagle to obtain a foam produced using a desirable cooling rate and temperature in which advantages include avoidance of cracking and brittleness of the foam, and applications of activated carbon.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 18 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3, 8, and 22 of U.S. Patent No. 6,656,239.

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Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons set forth below.

The claims of the U.S. 6,656,239 disclose an isotropic carbon foam derived from a blend comprising a petroleum pitch, in which claims 3, 8, and 22 satisfy the limitations on density, compressive strength, pressure and heating temperature of the instant claim 18.

However, the claims of U.S. Patent No. 6,656,239 are silent with respect to a cooling rate of less than about 10°C to a temperature of 100°C, and to a value of thermal conductivity.

Applicants attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to column 4, lines 27-29 of U.S. Patent 6,656,239 that discloses thermal conductivities of less than about 1 W/mK. The foam is cooled to a temperature of about 100°C at a cooling rate of typically less than 10°C/min, however cooling rates somewhat higher may be used (column 6, lines 13-21). It is the examiner's position that this

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statement reads on the instantly claimed cooling rate of about 10°C/min. Thus, the instant claim 18 is an obvious variation of U.S. Patent No. 6,656,239.

6. Claim 18 is directed to an invention not patentably distinct from claims 3, 8, and 22 of commonly assigned U.S. Patent 6,656,239. Specifically, although the conflicting claims are not identical, they are not patentably distinct for the reasons set forth in paragraph 5 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 6,656,239, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.


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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Malini Krishnan whose telephone number is 571-272-6519. The examiner can normally be reached on Monday through Friday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


12/05/2006


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